Text S2. Details of the *L. monocytogenes* CT (R Summary Output)

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Call:
rpart(formula = lm ~ water_prox + urban_prox + forest_prox +
    live_prox + farm + season + st + wtdepannmi + drclassdcd +
    FT.0 + FT.0_1 + FT.0_2 + FT.0_3 + FT.0_4 + FT.0_5 + FT.0_6 +
    FT.0_7 + FT.0_8 + FT.0_9 + FT.0_10 + FT.1 + FT.2 + FT.3 +
    pca.eig1.time + pca.eig2.time + pca.eig1.space + slope +
    PRCP.1_mm + PRCP.0_mm + PRCP.0_1_mm + TOBS.3_C.residuals,
    data = all.farm.2012.KW, weights = all.farm.2012.KW$LM.weights.25,
    method = "class", model = T, control = rpart.control(xval = 25))
  n= 588

         CP nsplit rel error    xerror       xstd
1 0.20170455      0 1.0000000 1.0000000 0.08166273
2 0.07102273      1 0.7982955 0.9318182 0.08069936
3 0.02840909      4 0.5852273 0.7642045 0.07708643
4 0.02130682      5 0.5568182 0.6562500 0.07372577
5 0.02100000      7 0.5142045 0.6988636 0.07515734

Node number 1: 588 observations,    complexity param=0.2017045
  predicted class=0  expected loss=0.4131455
    class counts:   125    88
   probabilities: 0.587 0.413
  left son=2 (514 obs) right son=3 (74 obs)
  Primary splits:
      water_prox    < 37.5       to the right, improve=9.376218, (0 missing)
      urban_prox    < 3.5        to the right, improve=8.625608, (0 missing)
      st            < 2.5        to the left,  improve=8.543758, (0 missing)
      pca.eig1.time < 1.482534   to the left,  improve=7.742247, (23 missing)
      live_prox     < 94.5       to the right, improve=7.319187, (0 missing)
  Surrogate splits:
      drclassdcd  splits as  LRLRLL, agree=0.845, adj=0.180, (0 split)
      forest_prox < 14.5       to the right, agree=0.831, adj=0.106, (0 split)
      urban_prox  < 3.5        to the right, agree=0.822, adj=0.056, (0 split)

Node number 2: 514 observations,    complexity param=0.07102273
  predicted class=0  expected loss=0.341534
    class counts: 113.75    59
   probabilities: 0.658 0.342
  left son=4 (344 obs) right son=5 (170 obs)
  Primary splits:
      pca.eig1.time      < 1.482534   to the left,  improve=6.323858, (20 missing)
      TOBS.3_C.residuals < -1.071865  to the right, improve=5.562601, (20 missing)
      live_prox          < 75.5       to the right, improve=4.200035, (0 missing)
      urban_prox         < 1.5        to the right, improve=3.929756, (0 missing)
      water_prox         < 121        to the left,  improve=3.330788, (0 missing)
  Surrogate splits:
      TOBS.3_C.residuals < -1.071865  to the right, agree=0.951, adj=0.868, (0 split)
      FT.0_7             < 0.5        to the left,  agree=0.835, adj=0.556, (20 split)
      FT.0_6             < 0.5        to the left,  agree=0.811, adj=0.490, (0 split)
      FT.0_8             < 0.5        to the left,  agree=0.793, adj=0.440, (0 split)
      FT.0_9             < 0.5        to the left,  agree=0.793, adj=0.440, (0 split)
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Node number 3: 74 observations,    complexity param=0.02840909
  predicted class=1  expected loss=0.2795031
    class counts: 11.25    29
   probabilities: 0.280 0.720
  left son=6 (10 obs) right son=7 (64 obs)
  Primary splits:
      pca.eig1.time      < -5.08781   to the left,  improve=2.7020010, (3 missing)
      TOBS.3_C.residuals < 6.616082   to the right, improve=1.8522690, (3 missing)
      PRCP.1_mm          < 2.286      to the right, improve=0.9708700, (0 missing)
      pca.eig2.time      < 1.487796   to the left,  improve=0.7894737, (3 missing)
      PRCP.0_mm          < 3.81       to the left,  improve=0.6248424, (0 missing)
  Surrogate splits:
      TOBS.3_C.residuals < 6.616082   to the right, agree=0.974, adj=0.6, (0 split)
      pca.eig2.time      < -2.596327  to the left,  agree=0.947, adj=0.2, (0 split)

Node number 4: 344 observations,    complexity param=0.02130682
  predicted class=0  expected loss=0.2227603
    class counts: 80.25    23
   probabilities: 0.777 0.223
  left son=8 (304 obs) right son=9 (40 obs)
  Primary splits:
      urban_prox     < 9.5        to the right, improve=2.910620, (0 missing)
      pca.eig1.time  < -5.08781   to the left,  improve=1.984241, (0 missing)
      pca.eig1.space < -0.7464156 to the left,  improve=1.478195, (0 missing)
      live_prox      < 31.5       to the right, improve=1.403046, (0 missing)
      pca.eig2.time  < 0.07029046 to the right, improve=1.363653, (0 missing)
  Surrogate splits:
      pca.eig1.space < 2.092026   to the left,  agree=0.852, adj=0.047, (0 split)

Node number 5: 170 observations,    complexity param=0.07102273
  predicted class=1  expected loss=0.4820144
    class counts:  33.5    36
   probabilities: 0.482 0.518
  left son=10 (80 obs) right son=11 (90 obs)
  Primary splits:
      pca.eig1.space < 1.103122   to the right, improve=3.674090, (0 missing)
      live_prox      < 62.5       to the right, improve=3.600869, (0 missing)
      forest_prox    < 356        to the right, improve=3.209371, (0 missing)
      drclassdcd     splits as  LLRRRL, improve=2.701710, (0 missing)
      water_prox     < 161        to the left,  improve=2.554549, (0 missing)
  Surrogate splits:
      water_prox < 647.5      to the right, agree=0.777, adj=0.404, (0 split)
      live_prox  < 303.5      to the right, agree=0.777, adj=0.404, (0 split)
      drclassdcd splits as  RLLRRL, agree=0.777, adj=0.404, (0 split)
      slope      < 0.5        to the left,  agree=0.763, adj=0.365, (0 split)

Node number 6: 10 observations
  predicted class=0  expected loss=0
    class counts:   2.5     0
   probabilities: 1.000 0.000

Node number 7: 64 observations
  predicted class=1  expected loss=0.2317881
    class counts:  8.75    29
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probabilities: 0.232 0.768

Node number 8: 304 observations
predicted class=0 expected loss=0.1719198
class counts: 72.25 15
probabilities: 0.828 0.172

Node number 9: 40 observations, complexity param=0.02130682
predicted class=0 expected loss=0.5
class counts: 8 8
probabilities: 0.500 0.500
left son=18 (30 obs) right son=19 (10 obs)
Primary splits:
water_prox < 512.5 to the right, improve=1.846154, (0 missing)
live_prox < 44 to the right, improve=1.846154, (0 missing)
drclassdcd splits as -LL-RR, improve=1.481481, (0 missing)
pca.eig1.space < 1.462505 to the right, improve=1.353353, (0 missing)
pca.eig1.time < -5.08781 to the left, improve=1.309091, (0 missing)
Surrogate splits:
pca.eig1.space < 1.462505 to the right, agree=0.938, adj=0.84, (0 split)
forest_prox < 190 to the right, agree=0.875, adj=0.68, (0 split)
slope < 3.5 to the right, agree=0.812, adj=0.52, (0 split)
urban_prox < 5.5 to the left, agree=0.750, adj=0.36, (0 split)
farm < 1.5 to the right, agree=0.750, adj=0.36, (0 split)

Node number 10: 80 observations
predicted class=0 expected loss=0.3076923
class counts: 18 8
probabilities: 0.692 0.308

Node number 11: 90 observations, complexity param=0.07102273
predicted class=1 expected loss=0.3563218
class counts: 15.5 28
probabilities: 0.356 0.644
left son=22 (40 obs) right son=23 (50 obs)
Primary splits:
live_prox < 62.5 to the right, improve=5.423411, (0 missing)
water_prox < 118 to the left, improve=4.450575, (0 missing)
pca.eig1.space < -3.64249 to the left, improve=4.184943, (0 missing)
urban_prox < 99.5 to the right, improve=2.576245, (0 missing)
forest_prox < 356 to the right, improve=1.960029, (0 missing)
Surrogate splits:
water_prox < 143 to the left, agree=0.920, adj=0.714, (0 split)
pca.eig1.space < -3.64249 to the left, agree=0.874, adj=0.551, (0 split)
FT.0_8 < 5.5 to the right, agree=0.828, adj=0.388, (0 split)
FT.0_9 < 6.5 to the right, agree=0.828, adj=0.388, (0 split)
FT.0_10 < 7 to the right, agree=0.828, adj=0.388, (0 split)

Node number 18: 30 observations
predicted class=0 expected loss=0.3076923
class counts: 6.75 3
probabilities: 0.692 0.308

Node number 19: 10 observations

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  predicted class=1  expected loss=0.2
    class counts:  1.25     5
   probabilities: 0.200 0.800

Node number 22: 40 observations
  predicted class=0  expected loss=0.244898
    class counts:  9.25     3
   probabilities: 0.755 0.245

Node number 23: 50 observations
  predicted class=1  expected loss=0.2
    class counts:  6.25    25
   probabilities: 0.200 0.800

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